

2-stage filter for 3-phase systems

**Description**

- Terminals for three phases and ground
- High symmetrical and asymmetrical attenuation
- In the frequency range from 10kHz up to 300MHz

**Standards**

- IEC 60939
- UL 1283, Edition 5, CSA 22.2 No. 8-M1986, @ Ta 75 °C

**Approvals**

- VDE Certificate Number: 40029853
- UL File Number: E72928

**Applications**

- Voltage rating 480 and 520 VAC for world wide acceptance
- Protection against interference voltage from the mains
- Especially designed for industrial applications such as: Frequency Converters, Stepper Motor Drives, UPS-Systems, Inverters
- Qualified for use in equipment according IEC/EN 60950

**Weblinks**

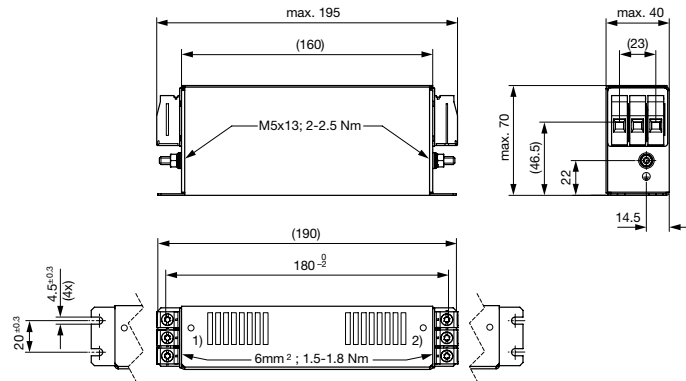
[pdf-datasheet](#), [html-datasheet](#), [General Product Information](#), [Approvals](#), [CE declaration of conformity](#), [RoHS](#), [CHINA-RoHS](#), [e-Shop](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#), [Detailed request for product](#)

**Technical Data**

Rated Current	7 - 180 A	Mounting	Screw-on mounting on chassis
Rated voltage	480/520 VAC, 50/60 Hz	Terminal	Screw clamps
Approval for	7 - 180 A @ 50 (75) °C / 480/520 VAC; 50/60 Hz	Operating Temperature [°C]	-25 °C to 100 °C
Overload Current	1.5 x I <sub>r</sub>	Climatic Category	25/100/21 acc. to IEC 60068-1
Dielectric Strength	480/520 VAC: > 2.25 kVDC between L-L > 2.75 kVDC between L-PE Test voltage 2 sec	Degree of Protection	IP 20 acc. to IEC 60529
Number of Filter Stages	2-stage	Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
Weight	0.8 - 8 kg	MTBF	> 200'000h acc. to MIL-HB-217 F
Material: Housing	Metal		
Sealing Compound	UL 94V-0		

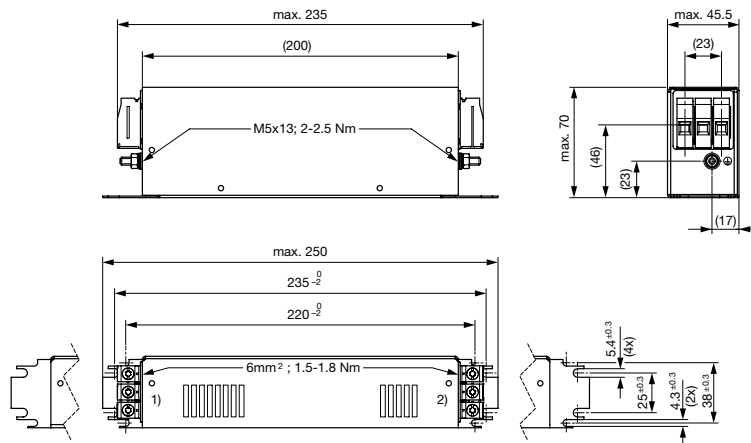
## Dimensions

### Case 1U



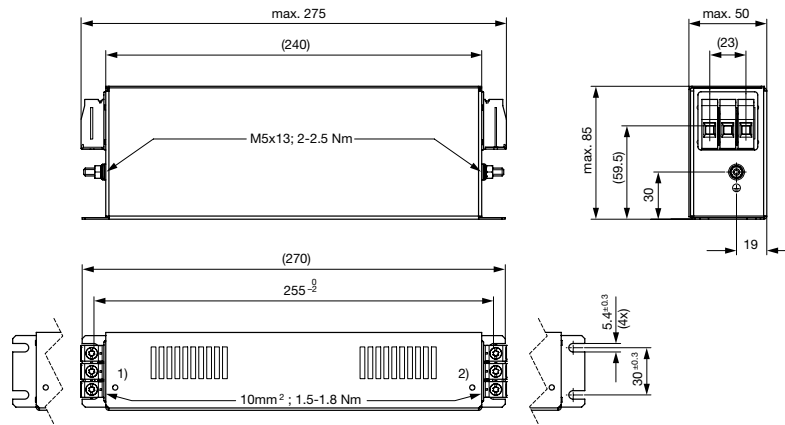
- 1) Line
- 2) Load

### Case 1C



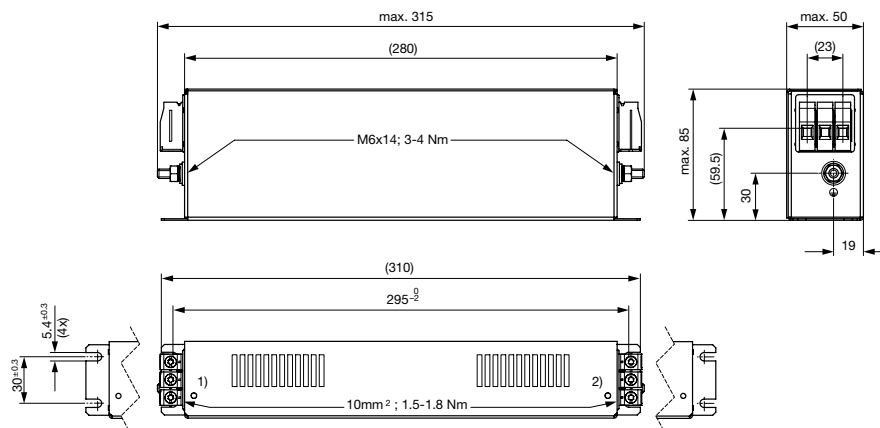
- 1) Line
- 2) Load

Case 1Q



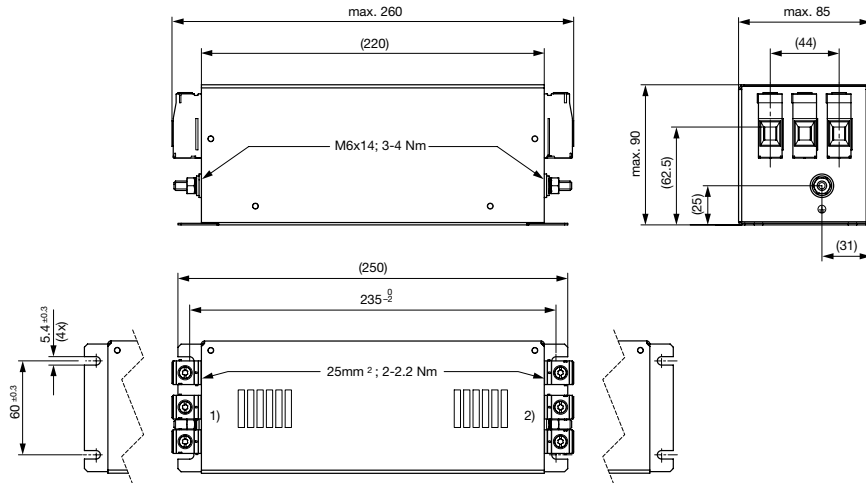
- 1) Line
- 2) Load

Case 1R



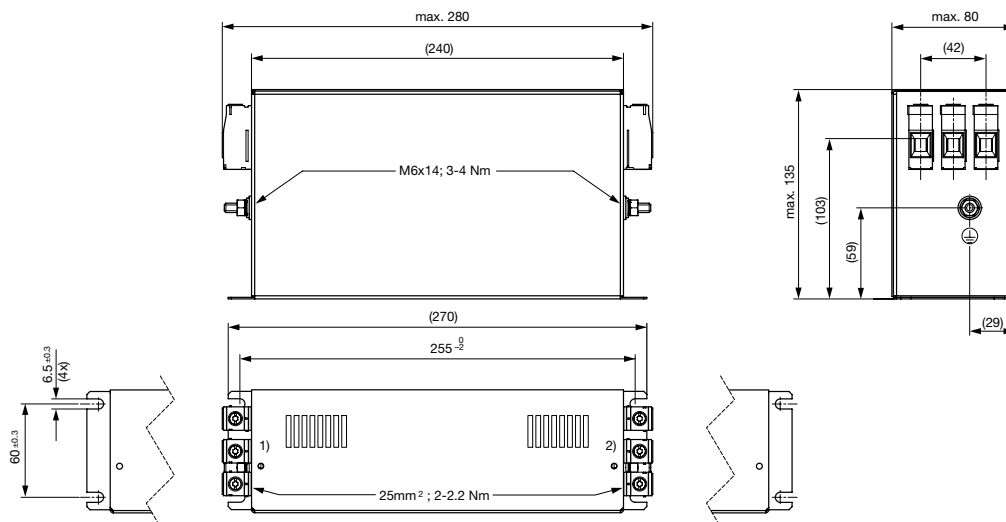
- 1) Line
- 2) Load

## Case 1S



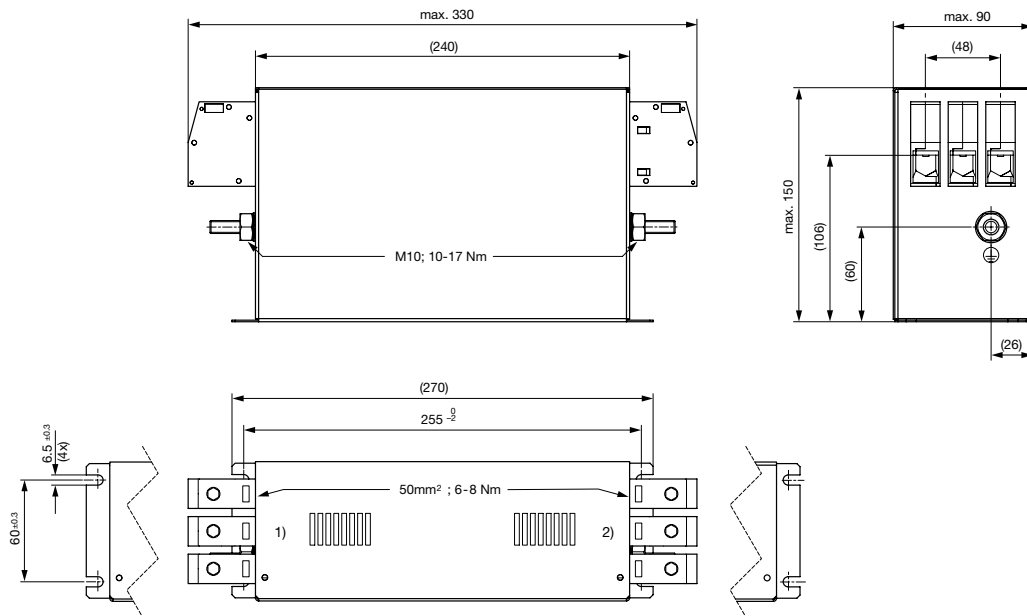
- 1) Line
- 2) Load

## Case 1F



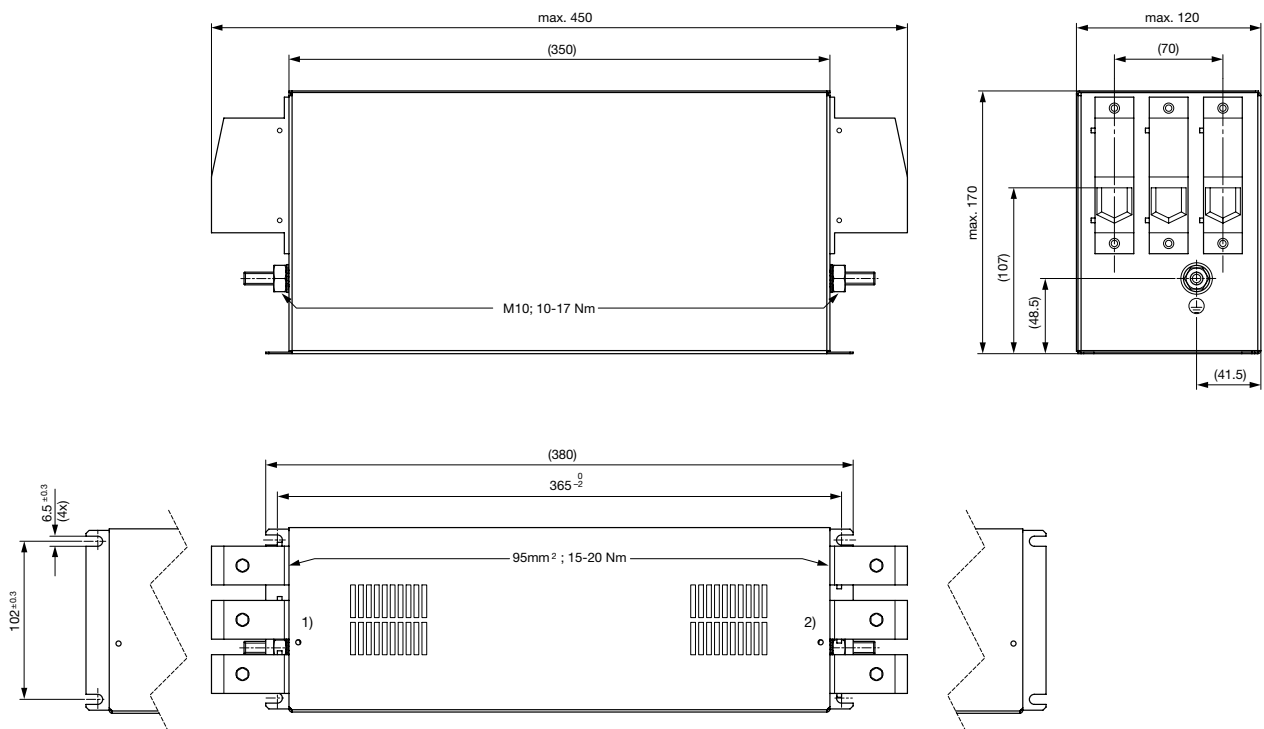
- 1) Line
- 2) Load

Case 1G



- 1) Line
- 2) Load

Case 1V

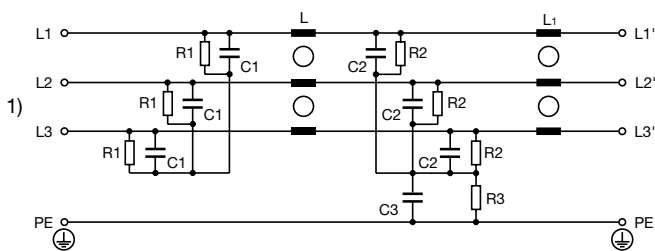


- 1) Line
- 2) Load

### Technical data to the filter components

Rated Current @ Ta 50°C (75°C) [A]	L [mH]	L2 [μH]	C1 [μF]	C2 [μF]	C3 [μF]	R1 [MΩ]	R2 [MΩ]	R3 [MΩ]
7 (4.7)	2.7	5	3.3	3.3	3.3	-	1	1
16 (12)	1.9	10	6.6	3.3	3.3	1	1	1
30 (21)	1.9	10	6.8	3.3	3.3	1	1	1
42 (31)	1.3	10	9.9	3.3	3.3	1	1	1
55 (49)	1.8	13	10	3.3	3.3	1	1	1
75 (52)	1.2	13	9.9	3.3	3.3	1	1	1
100 (70)	1.2	13	9.9	3.3	3.3	1	1	1
130 (92)	0.7	26	9.9	3.3	3.3	1	1	1
180 (135)	0.4	31	10	3.3	3.3	1	1	1
7 (4.7)	2.7	5	3.3	3.3	3.3	-	1	1
16 (12)	1.9	10	6.6	3.3	3.3	1	1	1
30 (21)	1.9	10	6.8	3.3	3.3	1	1	1
42 (31)	1.3	10	9.9	3.3	3.3	1	1	1
55 (49)	1.8	13	10	3.3	3.3	1	1	1
75 (52)	1.2	13	9.9	3.3	3.3	1	1	1
100 (70)	1.2	13	9.9	3.3	3.3	1	1	1
130 (92)	0.7	26	9.9	3.3	3.3	1	1	1
180 (135)	0.4	31	10	3.3	3.3	1	1	1

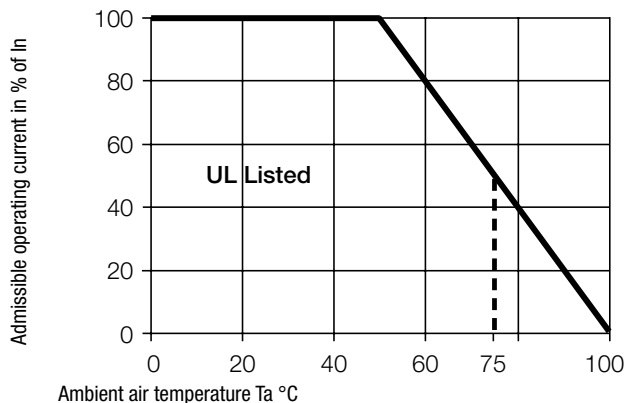
### Diagrams



1) Line

### Derating Curves

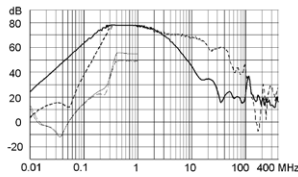
Permissible Working Current as a Function of Ambient Temperature



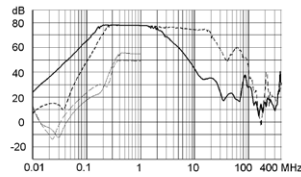
**Attenuation Loss** . . . . . 0.1/100Ω differential mode ..... 100/0.1Ω differential mode - - - - differential mode \_\_\_\_ common mode

Industrial version

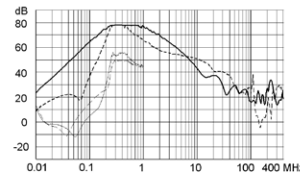
7A



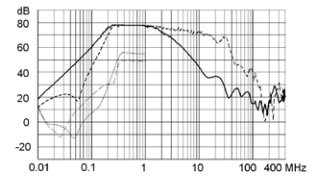
16A



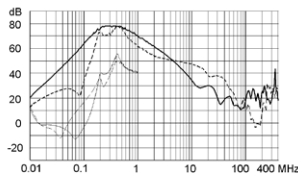
30A



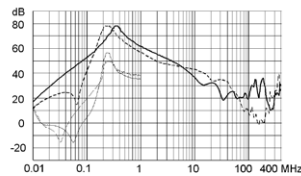
42A



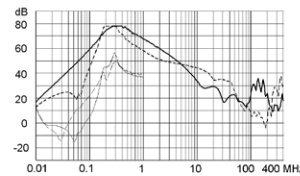
55A



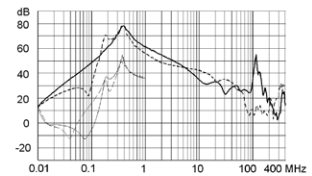
75 A



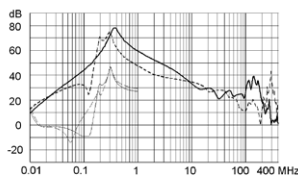
100A



130A



180A



**Variants**

Rated Current @ Ta 50°C (75°C) [A]	Rated Voltage [VAC]	Tripped Power Dissipation [W]	Leakage Current [mA] <sup>1)</sup>	Contact Resistance [mΩ]	Weight [kg]	Screw clamps [mm <sup>2</sup> ] <sup>2)</sup>	Housing	Packaging unit	Order Number
7 (4.7)	-	1.4	< 33	9.2	0.8 kg	6	1U	3	FMBC-A91U-0710
16 (12)	-	4.9	< 33	6.3	1.1 kg	6	1C	3	FMBC-A91C-1610
30 (21)	-	6.8	< 33	2.5	1.5 kg	10	1Q	4	FMBC-A91Q-3010
42 (31)	-	13.8	< 33	2.6	1.9 kg	10	1R	3	FMBC-A91R-4210
55 (49)	-	12.7	< 33	1.4	2.5 kg	25	1S	2	FMBC-A91S-5510
75 (52)	-	16.9	< 33	1	3.8 kg	25	1F	1	FMBC-A91F-7510
100 (70)	-	24	< 33	0.8	5 kg	50	1G	1	FMBC-A91G-J010
130 (92)	-	30.5	< 33	0.6	4.8 kg	50	1G	1	FMBC-A91G-J310
180 (135)	-	19.5	< 33	0.2	8 kg	95	1V	1	FMBC-A91V-J810
7 (4.7)	520	1.4	< 33	9.2	0.8 kg	6	1U	3	FMBC-A91U-0712
16 (12)	520	4.9	< 33	6.3	1.1 kg	6	1C	3	FMBC-A91C-1612
30 (21)	520	6.8	< 33	2.5	1.5 kg	10	1Q	4	FMBC-A91Q-3012
42 (31)	520	13.8	< 33	2.6	1.9 kg	10	1R	3	FMBC-A91R-4212
55 (49)	520	12.7	< 33	1.4	2.5 kg	25	1S	2	FMBC-A91S-5512
75 (52)	520	16.9	< 33	1	3.8 kg	25	1F	1	FMBC-A91F-7512
100 (70)	520	24	< 33	0.8	5 kg	50	1G	1	FMBC-A91G-J012
130 (92)	520	30.5	< 33	0.6	4.8 kg	50	1G	1	FMBC-A91G-J312
180 (135)	520	19.5	< 33	0.2	8 kg	95	1V	1	FMBC-A91V-J812

1) Nominal leakage current acc. to IEC60950 - 5.2.5. under normal operating conditions. Note: worst case leakage current acc. to IEC60950 - Annex G4 (situation with two interrupted lines) can be much higher.

2) Maximum conductor cross section (wire gauge) to be used; a comparative table for AWG and mm<sup>2</sup> values can be found in the general product information www.schurter.com/emc\_info